1   1.   A dynamic planning method comprising:

2   generating a project list with a plurality of activities;

3   selecting two or more activities from a plurality of activities within a project plan;

4   generating a time precedence relationship between the selected activities

5   structuring the one or more activities with an activity pre-structured process model;

6   structuring the time precedence relationships with an activity relationship pre-structured

7   model;

8   associating an activity characteristics value with the activity pre-structured process

9   model;

10   associating an activity relationship value with the activity relationship pre-structured

11   model to provide a dynamic planning method (DPM) project planning model; and

12   dynamically adjusting the DPM project planning model to provide a DPM project plan.

1   2.   The method of claim 1, wherein associating an activity characteristics value with the

2   activity pre-structured process model comprises:

3   providing a user-defined activity reliability value for each of the one or more activities;

4   and

5   associating the activity reliability value with the activity relationship pre-structured model.

1   3.   The method of claim 1, wherein associating an activity characteristics value with the

2   activity pre-structured process model comprises:

3   providing a user a user-defined production type value for each of the one or more

4   activities;

5   associating the production type value with the activity pre-structured process model.

1   4.   The method of claim 1, wherein associating an activity relationship value with the

2   activity relationship pre-structured model comprises:

3   providing a user-defined time precedence relationship between the one or more

4   activities;

5   associating the time precedence relationship with the activity relationship pre-structured model.

1   5.   The method of claim 1, wherein associating an activity relationship value with the

2   activity relationship pre-structured model comprises:

3   providing a user-defined sensitivity value for the time precedence relationship;

4   associating the sensitivity value with the activity relationship pre-structured model.

1   6.   The method of claim 1, further comprising:

2   associating a policy value with the activity pre-structured process model.

1   7.   The method of claim 6, wherein associating the first policy value with the activity pre-

2   structured process model comprises:

3   providing the first policy value as a user-defined first policy value;

4   associating the first policy value with the activity pre-structured process model.

1   8.   The method of claim 1, wherein dynamically adjusting the DPM project planning model

2   to provide a DPM project plan comprises:

3   automatically generating one or more reliability buffers in association with respective

4   ones of the one or more activities to, wherein each reliability buffer has a duration value, an

5   upstream time precedence relationship between the reliability buffer and an upstream activity,

6   and a downstream time precedence relationship between the reliability buffer a downstream

7   activity, to provide the DPM project plan.

1   9.   The method of claim 8, wherein the downstream time precedence relationship is finish

2   to start with no lag or lead.

1   10.   The method of claim 8, wherein the automatically generating one or more reliability

2   buffers comprises:

3   associating the activity characteristics value, the activity relationship value, the activity

4   pre-structured process model, and the activity relationship pre-structured model.

1   11.   The method of claim 10, wherein the automatically generating one or more reliability

2   buffers further comprises:

3   associating the policy value with the activity pre-structured process model, and the

4   activity relationship pre-structured model.

1   12.   The method of claim 8, further comprising:

2   selecting one or more updated activities;

3   providing at least one of updated activity characteristics data, updated activity

4   relationship data, and updated policy data associated with the updated activities, to provide an

5   updated DPM project planning model; and

6   dynamically updating the DPM project planning model to provide an updated DPM project

7   plan.

1   13.   The method of claim 12, wherein dynamically updating the DPM project planning

2   model to provide an updated DPM project plan comprises:

3   automatically generating one or more updated reliability buffers in association with

4   respective ones of the one or more updated activities, wherein each updated reliability buffer

5   has an updated duration value, an updated time precedence relationship between the updated

6   reliability buffer and an upstream activity, and an updated time precedence relationship

7   between the updated reliability buffer and an upstream activity, to provide the updated DPM

8   project plan.

1   14.   The method of claim 13, wherein automatically generating one or more updated

2   reliability buffers comprises:

3   associating the updated activity characteristics value, the updated activity relationship value, the

4   activity pre-structured process model, and the activity relationship pre-structured model.

1   15.   The method of claim 14, wherein automatically generating one or more updated

2   reliability buffers comprises further comprises:

3   identifying a similar activity corresponding to a respective one of the one or more updated

4   activities, having similar activity characteristics values, similar activity relationship values and

5   similar policy values, based upon a similarity criteria;

6   associating the similar activity characteristics values, the similar activity relationship values, the

7   similar activity pre-structured process model, and the similar activity relationship pre-structured

8   model; and

9   adjusting the duration values, the upstream time precedence relationships and the upstream time

10   precedence relationship of the updated reliability buffers.

1   16.   The method of claim 15, wherein the similarity criteria is equality.

1   17.   A dynamic planning apparatus comprising:

2   a dynamic planning method (DPM) data processor that provides activity data that is a

3   combination of policy data, activity characteristics data, and activity relationship data; and

4   a DPM processor coupled to the DPM data processor to process the activity data to

5   provide a DPM project plan.

1   18.   The dynamic planning apparatus of claim 17, wherein the DPM processor also provides

2   one or more DPM performance profiles.

1   19.   The dynamic planning apparatus of claim 17, wherein the DPM data processor includes:

2   a DPM policy data processor that provides the policy data; and

3   a DPM activity data processor, that provides the activity characteristics data and the

4   activity relationship data.

1   20.   The dynamic planning apparatus of claim 19, wherein the DPM activity data processor

2   includes:

3   a DPM activity characteristics graphical user interface (GUI) that provides the activity

4   characteristics data; and

5   a DPM activity relationship GUI that provides the activity relationship data.

1   21.   The dynamic planning apparatus of claim 20, wherein the DPM activity data processor

2   includes a dependency structure matrix GUI for entry of the activity characteristics data and the

3   activity relationship data.

1   22.   The dynamic planning apparatus of claim 21, further comprising:

2   one or more conventional project planning models that provide conventional project

3   plan data; and

4   a data transfer processor coupled to the one or more conventional project planning

5   models and further coupled to the DPM data processor to receive the conventional project plan

6   data from the one or more conventional project planning models and to provide formatted data

7   to the DPM data processor.